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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,970	09/28/2001	Jeffrey D. Harper	33257/236160	5811

826 7590 10/20/2005

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EXAMINER

TUNG, KEE M

ART UNIT	PAPER NUMBER
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2671

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/966,970

Applicant(s)

HARPER, JEFFREY D.

Examiner

Kee M. Tung

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-10,12,14-16,18-20,23-25 and 27-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-10,12,14-16,18-20,23-25 and 27-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The RCE filed 8/23/05 has been considered in preparing this Office action.

It is noted that claim 4 was cancelled by the amendment filed 12/17/04 and withdrawn from consideration. Correction is required.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-10, 12, 14-16, 18-20, 23-25 and 27-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted Prior Art, figures 1 and 3 of the drawings and the respective areas of the specification (hereinafter "Prior Art") in view of Rao et al (WO 97/06523 hereinafter "Rao").

Prior Art teaches an imaging device for simultaneous image capture and image display updating (Fig. 1) comprising an imager (20) for capturing image data; a CPU (30) in communication with the imager and issues commands to capture image data; a DMA module in communication with the imager and the CPU; a memory module (60) in communication with the CPU and the DMA module includes a buffer (70); an image enhancer (see step 110 in figure 3) for enhancing image data stored in the first and second image capture buffers prior to display and reformatting the image data. However, Prior Art fails to explicitly teach or suggest the memory module includes two buffers and functions as doubled buffering while one is writing from CPU and the other

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buffer is refreshing (reading) the screen. This is what Rao teaches (Fig. 1, buffers 110 and 111 and page 15, first full paragraph). It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the teachings of Rao into the system of Prior Art because doubled buffering technique provides advantages over the single buffer by allowing concurrent update from one of the buffer and refresh from another buffer as taught by Rao (pages 5-9). Therefore, at least claims 1-3, 5-10, 12, 14-16, 18-20, 23-25 and 27 would have been obvious.

New claims 28-52 are similar in scope to claims 1-3, 5-10, 12, 14-16, 18-20, 23-25 and 27, and additionally require an portable data acquisition and display device (Fig. 1 and respective area of the specification) includes an image barcode reader (claim 33, which would have been obvious in view of the imager 20 of figure 1 because an image barcode reader or image scanner etc .... are considered one of the imager and can be replaced one from another by one ordinary skill in the art without any burden.) and a controller (claim 33, such as, core logic 103 or address logic 112 and data logic 114). Therefore, the newly added claims 28-52 also would have been obvious by the combination of Prior Art and Rao.

### ***Response to Arguments***

3. Applicant's arguments filed 8/23/05 have been fully considered but they are not persuasive.

Basically, applicant argues that there is no motivation to combine Rao into Prior Art and the examiner appears to be using hindsight and simply recites the problem identified and solved by the present invention. The examiner disagrees. First, the

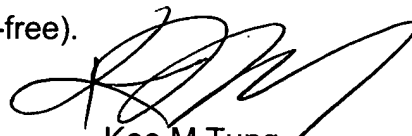
advantage of double buffering technique over the single buffer system is old and well known in the art includes from Rao (see pages 5-9). One of the motivation or advantages provided by Rao is that double buffering provides concurrent update one of the buffers and refresh from another buffer (see pages 5-9), which identifies and solves the same problem as applicant and thus prove the examiner is not using hindsight.

### ***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kee M. Tung whose telephone number is 571-272-7794. The examiner can normally be reached on Tuesday - Friday from 5:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Kee M Tung  
Primary Examiner  
Art Unit 2671